Music for Life 美樂人生 - 揉合音樂元素於傳統輕度認知障礙訓練計劃

The Effects of a Cognitive Intervention Programme with Music Therapy Elements (CIPMT) for People with Mild Cognitive Impairment: A Pilot Study

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Introduction

- MCI increases the risk for dementia
- **Cognitive Training**: effective to postpone cognitive decline in people with MCI
- **Conventional cognitive training**: one-way education, not fun, low motivation
- **Music Therapy**: enhance cognitive function & alleviate anxiety and depression
- In this study: INTEGRATE Cognitive Training with Music Therapy
Reasons for having research elements

1. **NEED** – Elderly suffering from MCI or dementia may have different degree of emotional problem (e.g. anxiety and depression)
   ➔ MUSIC: improve mood, reduce anxiety and depression

2. **INNOVATION** – Conventional Cognitive Intervention + Music Element
   ➔ Limited relevant study in HK

3. **PROMOTION** – Early detection, Early Intervention
   ➔ Sharing of evidence-based findings to other parties
Objective

- To assess the effects of a Cognitive Intervention Programme involving Music Therapy elements (CIPMT) in enhancing the cognitive function, daily living function and mood in people with mild cognitive impairment (MCI).
Contents of CIPMT

Conventional Cognitive Intervention
I) Cognitive Training
   • Mnemonic strategy
   • Attention
   • Calculation
   • Memory, etc
II) Cognitive Stimulation
   • Social activities
   • Interest groups, etc
III) Compensatory Cognitive Rehabilitation
   • Schedule
   • Visual cues, etc

INTEGRATE

Music Therapy Elements
• Musical instruments playing
• Tailor-made songs
• positive attitude and healthy living habit promotion
• Creativity
• Self-confidence
Application of Mnemonic strategy in daily living

“Imagery Mnemonic”

⇒ Items need to bring along before leaving home

Contents of CIPMT

《身要有「份」「銀」》

覆診掛號必須有 身份證 身份證 買餸買飯必須有 銀包看一看
Contents of CIPMT

Cognitive training with fun & excitement
- Creative Ocean Drum

Imagery & creativity
VIDEO 2
Cognitive training with fun & excitement
– Music Conductor

Attention, Self-confidence
40 elderly with MCI

By RCT

20 elderly joined CIPMT (Treatment Group)

20 elderly joined conventional cog. training without music element (Control Group)

Cognitive & psychosocial assessments are administered before and after the programme
Instruments

- **Cognition**
  - Mini-mental state examination (MMSE)
  - Montreal Cognitive Assessment Hong Kong version (HK-MoCA)

- **Memory**
- **Orientation**
- **Executive function**
- **Attention and concentration**
- **Language**
- **Visuoconstructional skills**

- **Mood**
  - Geriatric Depression Scale (GDS-SF)

- **Daily Living Function**
  - Lawton Instrumental Activities of Daily Living Scale (IADL)
# Group comparisons of demographic

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<th>Control</th>
<th>Treatment</th>
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<tbody>
<tr>
<td>N</td>
<td>17</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>76.5 (6.1)</td>
<td>75.9 (7.9)</td>
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<tr>
<td>Female</td>
<td>70.6%</td>
<td>87.5%</td>
<td>0.398</td>
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<tr>
<td>Education level</td>
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<tr>
<td>Illiterate</td>
<td>17.6%</td>
<td>37.5%</td>
<td>0.253</td>
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<tr>
<td>Primary</td>
<td>58.8%</td>
<td>31.3%</td>
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<tr>
<td>Secondary or higher</td>
<td>23.5%</td>
<td>31.3%</td>
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Findings – Cognitive Function

Subjects in both the control and treatment groups had improvement on the two cognitive measures. These two measures improved significantly more in the treatment group than in the control group.
Findings – Mood & IADL

Subjects’ GDS level of the treatment group was significantly lower than that of control group.

Subjects in the treatment group had significantly higher score than control subjects on Lawton IADL measure.
Lesson learned

- Participation in $\geq 12$ sessions of CIPMT is beneficial to **cognition, mood and daily functioning** in elderly people with MCI.
- Person-centered model: not only focus on their cognitive deficits, but also concern psycho-social aspect.
1. **Financial:** supported by Charitable Trusts administered by the HSBC Trustee (HK) Limited; sponsored by Alice Wu Memorial Fund for HKD 0.5 million.

2. **Professionals:** OT I & SW from HKSKHTKOACC; Outsource Music Therapy Service (Purchase outsourcing services); collaborate with Dr. Adrian Wong (CUHK)

3. **Front-line:** Full-time Program Worker (funding)

4. **Venue:** H. K. S.K.H. Tseung Kwan O Aged Care Complex
1. Financial support:
   - Outsource Music Therapy Service
   - Full time Programme Worker
   - Purchase of musical instrument
   - Production of training kit and CDs

2. Sincere support:
   - Attend our “Experience Sharing Seminar” for this programme

3. Monitoring:
   - Submit “Interim and Final Progress Review” for this 2-year project
Use of findings

- Sustainability: Experience sharing seminar, workshops, training kit
Use of findings

• Routine:
  – Integrate music element to routine training in OAH for dementia and MCI elderly
  – Re-union group

• Future planning:
  – Target for stroke clients with cognitive deficits (Cognitive + Music + Exercise)
  – Target for Christian with cognitive deficits (Cognitive + Music + Spiritual)
References

Questions
Study Limitations

• Limited sample size (still able to demonstrate significant differences in outcome measures)
• Selection bias of participants (attendees of a local elderly centre of TKO)
• Didn’t analyze the treatment effect in separate MCI subtypes and etiologies